

PATENT  
Atty. Dkt. No. SKY-010

IN THE CLAIMS

Please cancel claims 1-12 and 15

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)

13. (Previously presented) An antenna for communicating with a mesh network comprising:

a multi-layer circuit board having a first side and a second side, with a ground plane formed within the multi-layer circuit board;

an antenna array, affixed to the first side of the multi-layer circuit board, having M x N array of antenna elements, where M and N are integers greater than 1, said antenna array adapted to selectively synthesize one or more radiation patterns for communicating with neighboring nodes of said mesh network;

a driver circuit, affixed to the second side of the multi-layer circuit board, having a power divider that divides an input microwave signal into M signal paths, a plurality of phase shift circuits are coupled to M-1 paths and the output of each phase shift circuit is coupled to an antenna element, one of the M signal paths is coupled directly to an antenna element.

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14. (original) The antenna of claim 13 wherein M is 5 and N is 8.
15. (Cancelled)
16. (original) The antenna of claim 13 wherein the phase sift circuits comprise switched hybrid couplers that, in response to a control signal, phase shift the signals on the M-1 paths by a discrete phase amount.
17. (original) The antenna of claim 16 wherein the discrete phase shift is at least one of -90 degrees, 0 degrees and +90 degrees.
18. (original) The antenna of claim 17 wherein the discrete phase shifts cause a main beam of a radiation pattern formed by the array to be directed 0 degrees, +45 degrees and -45 degrees.
19. (original) The antenna of claim 13 further comprising a modem circuit and a transceiver circuit.